LIST OF BIRDS COLLECTED IN TIMOR BY MR. ALFRED EVERETT.

By ERNST HARTERT.

MR. EVERETT, who, I regret to say, is now ill in Singapore, has been to Timor, and sent a magnificent collection of birds. Although circumstances prevented his ascending any high elevations, and therefore this collection not containing many representatives of new species, these birds are of much value to Mr. Rothschild's Museum, because a great number of the species represented are new to the collection, many in fact being only known from a few specimens in the Leyden and British Museum's collections. As so many of the species have been first described from Timor, these Timor birds are especially valuable for comparison with those received from Flores, Savu, Sambawa, and other islands, whence we received collections of which no account has yet been given in this journal—in fact the relations of the ornis of all these islands could never have been properly studied by us without a Timor collection.

I extract the following from one of Mr. Everett's interesting letters :—

"I arrived at Atapupu on the 8th of July, in the middle of the dry season unfortunately, when the land was baked and the vegetation withered by long drought, so that there was almost an absolute dearth of animal life, excepting only birds, which were fairly plentiful.

"Atapupu or Atapoepoe, the second of the only two Dutch settlements in Timor, lies at the mouth of a deep gorge in the hills which line the coast a little to the west of the middle of the island, and between two portions of the Portuguese territory. Here a small perennial spring of good water, and the shelter afforded to small coasting craft by a narrow but deep passage through the fringing reef of dead coral to a safe anchorage within, have combined to favour the formation of a trading station. A 'Posthonder' is in charge, and the steamers of the subsidised Dutch mail company are under contract to call once every month. A branch of the Roman Catholic Mission at Larantuka has been in operation for some dozen years, and there is a smaller branch in the interior at Filaran, but they have made little impression on the Timorese so far. The population of Atapupu numbers about 1000, of whom some 300 are Chinese (including women and children), who are occupied chiefly in the collection of sandalwood, of which 6000 pikuls is exported yearly, beeswax, hides, etc., and in the importation of rum and gin, with as much smuggling of opium and coffee across the Portuguese frontier as they can manage. Ponies abound, but are not exported, as they are looked upon in the Java market as much inferior to those from Sumba, Savu, and Rotti. Atapupu may be regarded as the coast terminus of inland communication for a great part of Dutch Timor. The Chinese traverse almost the whole country, residing a good deal among the Timorese, who do not molest them; but the 'Posthonder' appears to exercise but little influence.

"My object in visiting Atapupu was chiefly to obtain a collection of the birds of Lekäan, the highest mountain of Dutch Timor, its elevation being some

6500 feet. It was reported to have some sort of jungle or scrub right up to the summit, whereas most of the other high mountains are said to be bare and grassy on their upper portions. I found on inquiry that no difficulty whatever existed, apparently, to reaching and working at the mountain, and accordingly, having collected most of the birds at Atapupu, and having been furnished by the 'Posthonder' with a man whom he recommended as guide and interpreter, I dispatched my men and luggage in charge of the latter, to go up as far as Filaran, intending to follow myself as soon as the steamer had passed. On the 27th, however, the guide came down, and reported to the 'Posthonder' that the people at Filaran were in a panic at the news of my coming up, had removed their families, cattle, etc., and that it was impossible to obtain a single pony or carrier. To make a long story short, I ultimately had to withdraw my men and abandon the idea of reaching the mountain. I subsequently ascertained that the guide had himself caused the panic, by telling the Timorese that my baggage consisted of gunpowder and bullets. The ignorant people, who were being shot and seized by the Portugnese on the frontier at the time, jumped at once to the conclusion that I was in league with the latter, and was coming up to attack them: and nothing would have disabused them of the idea except the 'Posthonder' going up with me, which, however, he was disinclined to do. My collection was thus formed entirely within a radius of about a dozen miles of Atapupu, and well below 2000 feet, in fact mostly below 500 feet. I have obtained good series of many species, which will be useful for comparison with the birds from other islands. I was much disappointed by getting no *Pitta!* These birds were diligently sought for, but not one was ever seen or heard.

"The heat in Timor was terrible, and we were all more or less sick. I got back to Makassar on the 3rd of September, and had to send home two of my Labuan men. My servant is down with strong fever, which does not seem inclined to get better, and I am not well myself."

Collections of birds from Timor have not often reached Europe. The largest collection in Timor has been made by that admirable Dutch traveller Salomon Müller, and his discoveries of new birds were mostly published in Dutch language in footnotes in his great work on the *Land- en Volkenkunde* of the Dutch East Indies; others were described by Temminck, others by Müller & Schlegel. The next large collection was made by Wallace, and the cream of it is now in the British Museum. Quite recently a Portuguese collector, with the English name of Newton, has sent many birds from Timor to the Lisbon Museum, but nothing is so far published about them, and we do not know whether he made any new discoveries in birds.

1. Corvus macrorhynchus Wagl.

Two *females*, both with the wing-quills in moult, shot at Filaran in July 1897. They are like specimens from Flores and elsewhere.

2. Artamus perspicillatus Bp.

This species, which has its closest ally (*A. melanops*) in Australia, was found at Filaran in W. Timor and at Atapupu. A young bird, just out of the nest, has narrow shaft-lines and tips of a brownish buff colour to the feathers of the upper

parts, on the breast and abdomen are faint dark cross-bars, the white tips to the tail-feathers are again narrowly tipped with black, and the longer under tail-coverts have wide white tips, which are narrowly bordered with black.

3. Artamus leucorhynchus (L.).

A pair from Atapupu.

4. Calornis minor (Bp.).

Filaran, W. Timor. Exactly like specimens from Flores, Sambawa, Lombok.

5. Geocichla peronii (Vieill.).

♀ ad. "Iris chocolate-brown; bill brownish black, basal half of mandible whitish; legs white, tinged with brown on the feet, and with lavender-grey on the tarsi; claws pale brown."

Common at Atapupu, from the sea-level up to about a thousand feet.

6. Pratincola caprata (L.).

Atapupu.

7. Oreicola melanoleuca (Vieill.).

Mr. Everett procured a large series near Atapupu in July and August 1897. In Wallace's list in *P. Z. S.* 1863, p. 485, this bird occurs twice, his *Saxicola luctuosa* being the *female* of his *S. melanoleuca*.

8. Cettia everetti sp. nov.

A small series of a *Cettia* from Atapupu are closely allied to *C. montana* Horsf. (cf. Nov. Zool. III. p. 538). They differ, however, in being above of a more greenish olive, not so brownish colour as *C. montana*, and in the breast not being washed with rufous brown. The tarsus is shorter in most specimens. There is a very pale whitish superciliary line. The iris of the *male* is "burnt sienna-colour; bill sepia-brown, mandible whitish yellow, brown towards the tip; legs yellowish white on their inner, light brown on their outer aspect; claws brown." The wing measures 50—51 mm.; tail 53—55; tarsus 18—20; culmen from base 13. A young bird has the middle of the abdomen distinctly yellow. Sexes alike.

This form is closely allied to *C. montana*, and may be considered only subspecifically different; but with the present lack of more definite knowledge of its allies, and of what may occur of it on Flores, Sambawa, and other islands, it is perhaps less venturous to describe it as a species.

I may here be allowed to say that the genus *Cettia* does not, in my opinion, at all belong to the *Turdidae*, among which they are placed in the *Cat. B. Brit. Mus.* V., but that their short rounded wing, bill, bristles, and the nidification, especially **the colour of their eggs**, point towards a position in Vol. VII. of the *Cat. B. Brit. Mus.*, probably not very far from the Tailor-birds.

I have here also to add that, besides the specimens from Mount Arjuno recorded in Nov. Zool. III. p. 538, we have two from Lombok, collected by Mr. W. Doherty.

9. **Orthnocichla subulata** Sharpe.

There is a good series of this rare little bird from Atapupu. "The iris is clay-brown: the bill pale brown, mandible horn-white; legs pinkish white." The bird was found right at the sea-level. This *Orthnocichla* differs considerably from *O. everetti* Hart. of Flores in being very much smaller, the beak being narrower and more pointed, the wing shorter, legs smaller and lighter in colour, in having a very distinct buffy white supereiliary line, which is not developed in *O. everetti*, and in its white breast, which is pale ashy grey in *O. everetti*. *O. whiteheadi* from Mount Kina Balu in Borneo differs in having a much darker, almost black crown, the back being much darker brown, the superciliary line rusty, sides of breast and flanks darker: under the superciliary stripe runs a blackish brown line from the eye to the neck, along the sides of the head. This line is not developed in *O. everetti* and *O. subulata*. While *O. whiteheadi* Sharpe is evidently a mountain bird, both *O. everetti* and *O. subulata* occur in the low country.

10. **Dumetia bivittata** (Bp.).

This bird, which is rare in collections, was found in numbers near Atapupu. "The iris is yellowish brown; the bill black, mandible lead-grey; legs and claws pale brown."

11. **Cisticola cisticola** (Temm.).

Atapupu and Filaran. Two rather dark specimens with rather dark tails.

12. **Acanthopneuste presbytis** (Blyth).

See my remarks in Nov. Zool. IV. p. 525, No. 52. We have now received two birds, both marked "♀", from Atapupu. Although they are only two, they are sufficient to show that the Flores bird is different, for they both agree with the Timor skins in the British Museum in being below very pale yellowish, of a somewhat striped appearance; chin and throat distinctly white. In the Flores birds the breast and abdomen are bright yellow; the chin and throat not white, but of a paler yellow. Sides of head and ear-coverts much lighter in the Timor specimens. Wings 49—51 mm. in the Timor skins, 54—60 in the Flores bird, the smaller ones being the *females*. Under the circumstances it becomes necessary to separate the Flores bird as

Acanthopneuste floris sp. nov.

I am of opinion that the genus *Acanthopneuste*, to which also *Cryptolopha sarasinorum* M. & Wg. of Celebes belongs, must be placed among the Flycatchers, but confess that the line cannot easily be drawn between many of the so-called *Sylviidae* and the *Muscicapidae*.

13. **Gerygone everetti** Hart.

Both sexes from Atapupu. ♂ and ♀. "Iris orange-yellow: bill and legs black."

14. **Siphia hyacinthina** (Temm.).

A magnificent series, shot in July and August at Atapupu. "Iris (♂ ad.) warm brown: bill and legs black."

15. **Myiagra rufigula** Wall.

Filaran and Atapupu. The depth of the rufous throat and chest varies very much.

16. **Piezorhynchus trivirgatus** (Temm.).

One adult *female*, Atapupu.

17. **Muscicapula westermanni** Sharpe.

♂ ♀. Atapupu.

18. **Erythromyias pyrrhonota** (Müll. & Schleg.).

Both sexes from Atapupu, where it is common. ♂ ad. "Iris chocolate-brown: bill black; legs and feet dark purplish grey."

19. **Rhipidura rufiventris** (Vieill.).

Common near Atapupu.

20. **Rhipidura semicollaris** Müll. & Schleg.

A series from Atapupu.

Timor is the original locality for this form: our Atapupu skins are therefore to be regarded as typical. The Flores form (see Vol. IV. pp. 525, 526) have the wings generally longer, but one ♂ has it not longer than 71 mm., while one Timor *male* has it almost 70 mm. long. Therefore I do not dare to separate them without further evidence. The *Rh. celebensis* (which does not seem to occur in Celebes) differs only from *semicollaris* in its slightly broader black chest-band and a little greater extent of the rusty red colour on the mantle. *Rh. sumbensis* is again only distinguishable by a wider black chest-band and slightly longer wing on an average. These forms are closely allied, and all subspecies of one species.

21. **Graucalus melanops** (Lath.).

♂ ♀ ad. Filaran, July 1897. They seem to be indistinguishable from Australian specimens, but it is remarkable that some of the latter are so much paler than others. Perhaps the New Guinea birds are paler as a rule, but I have not sufficient material to come to any conclusion about it.

22. **Graucalus personatus** (S. Müll.).

Mr. Everett procured a fine series at Atapupu in July and August. They were then in good plumage. The "iris is brown; bill black; legs dark grey." The upper wing-coverts and scapulars are slaty grey, and not black, as said in the *Cat. B. Brit. Mus.* IV. p. 13. The under wing-coverts and axillaries are white in both sexes, and only in some specimens washed with rusty buff near the bend of the wing, and this is not a character peculiar to the *female*.

23. **Lalage timoriensis** (S. Müll.).

Filaran, ♂ juv., July. Atapupu, ♂ ad., July.

24. Dicrurus densus Bp.

A small series from Atapupu, July and August. ♀ ad. "Iris lake-red: bill and feet black."

25. Sphecothera viridis Vieill.

♂ ad. "In life the orbits always seem to be brick-red, but after death become white or yellowish, though the red colour is sometimes retained. Iris cinnabar-red: bill black: legs lead-grey." Iris in a young *male* "clay-brown." In adult *females*: "Iris chocolate-brown: bare orbits and eye-ring pale green; bill sepia-brown: legs dark grey; claws blackish." Young *males* are in plumage like the adult *females*, but slightly darker brown above, and the secondaries and wing-coverts more distinctly bordered with greenish.

Common at Atapupu in July and August.

26. Oriolus viridifuscus Heine.

Sharpe was quite right in describing the brown bird as the *female* of the greenish one (*Cat. B. Brit. Mus.* III. p. 208, Pl. XI.). The bill of the *female*, however, is not red. ♀. "Iris cinnabar-red; bill dark blackish brown." ♂ juv. In plumage like the *female*, only the chest with blackish longitudinal lines, which are absent in most *females*, though not all. "Iris chocolate-brown; bill brownish black; legs olivaceous grey." ♂ ad. "Iris cherry-red; bill pinkish brown; legs lead-grey." Some *males* have very green wash on the breast, while one is there strongly washed with green.

The species was common at Atapupu.

27. Pachycephala calliope Bp.

A series from Atapupu.

28. Pachycephala orpheus Jard.

A large series from Atapupu. The *female* is like the *male*, but young birds have the crown not distinctly grey.

29. Lanius bentet Horsf.

Three specimens from Atapupu.

30. Philemon timoriensis (S. Müll.).

Rare near Atapupu. "Iris (♀) dull white, bleared with brown."

31. Philemon inornatus (Gray).

"Iris (♂) raw sienna-brown or chestnut-brown." ♀ ad. "Iris chocolate-brown; bill black; legs blackish grey."

Not rare near Atapupu. The *female* is smaller than the *male*. Gadow, in *Cat. B. Brit. Mus.* IX., gives 4·4 to 4·6 inches as the length of the wing. This is right, but 4·4 is that of the *female's*, 4·6 that of the *male's* wing.

32. **Ptilotis reticulata** (Temm.).

Common at Atapupu and Filaran. The *female* is quite like the *male*, only much smaller. Wing in *males* 80—82 mm., in *females* 74—77 mm. "Iris dark lavender-grey."

33. **Ptilotis maculata** (Temm.).

A single *female* of this rare species from Atapupu.

34. **Zosterops muelleri** (Hartl.).

A large series from low country near Atapupu. ♂ ♀. "Iris deep Indian red; orbital skin bluish black: bill very dark horn-grey: feet and legs greenish plumbeous; claws light brown." This species has the feathers of the crown lengthened, and rather round and compact. The bill is strong and large, as in my "*Lophozosterops*," and also as in *Z. superciliaris* and *Z. crassirostris* from Flores, the latter of which has also a similar structure of the feathers of the crown. My *Lophozosterops*, however, although similar in most points, has the feathers of the crown longer, looser, and more pointed. Dr. Hartlaub made *Z. muelleri* the type of his genus *Heleia*, which, however, has not been recognised by Sharpe (*Cat. B.* IX. p. 202). If it is recognised, my *Lophozosterops* must either be united with it and not with *Zosterops*, or must be separately recognised as a genus, though there is not much generic value in either of them.

35. **Zosterops citrinella** Bp.

Common at Atapupu. Everett's and Doherty's collections from the East have shown that this species, formerly only known from Timor, extends from Timor to the mountains of Eastern Java, being found on Flores, Savu, Sumba, Sambawa, Lombok, and Mount Arjuno.

36. **Cinnyris solaris** (Temm.).

Two *males* from Atapupu.

37. **Myzomela vulnerata** (S. Müll.).

Several *males* from Atapupu.

38. **Dicaeum mackloti** Müll. & Schleg.

Atapupu. Like specimens from Savu.

39. **Piprisoma obsoletum** (Müll. & Schleg.).

♂ ♀. Filaran and Atapupu.

I must here correct a mistake which I made formerly. **What I recorded as "*Prionochilus obsoletus*" from Sambawa on p. 567 of Vol. III. of** Nov. Zool. **is not this species,** but

Acmonorhynchus annae Büttik.

The bad condition of the skins prevented my seeing the yellow rump-patch, and I had no specimens of *P. obsoletum* from Timor, but judged from descriptions. On

the other hand, what I recorded as *P. obsoletum* from Sumba (p. 581, Nov. Zool. III.) really does belong to that group, but is probably separable subspecifically from typical *obsoletum*. The Sumba form will be fully discussed in a future article.

40. **Munia fuscata** (Vieill.).

Three from Atapupu. "Iris (♂ ad.) lake-red; bill pale bluish grey; legs lavender-grey."

41. **Munia punctulata nisoria** (Temm.).

Young *male*, July, Atapupu.

42. **Munia molucca propinqua** (Sharpe).

A pair from Atapupu seems to belong to the subspecies *propinqua*.

43. **Taeniopygia insularis** (Wall.).

Common near Atapupu.

44. **Sporaeginthus flavidiventris** (Wall.).

Atapupu. The white spots on the breast seem to be smaller than in my skins from Lombok and Flores, but there is only one *male* from Timor.

45. **Halcyon chloris** (Bodd.).

Two rather large specimens with dark pileum, both *females*, Atapupu, July. Wings 108 and 109 mm. Like specimens from Savu.

46. **Halcyon australasiae** (Vieill.).

July, Atapupu.

47. **Halcyon sanctus** Vig. & Horsf.

One *male*, Atapupu.

48. **Alcedo ispida floresiana** Sharpe.

Two *males* and two *females*, all adult, from Atapupu. Both *males* have the mandible as well as the maxilla entirely black, while both *females* have the mandible entirely red. Wings of the *males* 72 mm., of the *females* 68 and 72 mm.

49. **Merops ornatus** Lath.

Not rare at Atapupu.

50. **Centropus javanicus** Dumont.

♀ juv., Atapupu.

51. **Chalcococcyx malayanus** (Raffl.).

A single skin from Atapupu.*

52. **Psitteuteles euteles** (Temm.).

Half-a-dozen skins, Atapupu, August. "Iris orange; bill orange-red, with yellow tip; orbital skin black; feet dark olivaceous grey, claws dark brownish horn-grey."

The typical form is the Timor one. In the adult *male* the ear-coverts are much brighter and more golden yellow, a character not mentioned in most descriptions. As I have said before this, the specimens from Flores are like those from Timor.

53. **Neopsittacus rubripileum** Salvad.

A large series, Atapupu, and one *female* from Filaran in W. Timor, shot in July and August. ♀. "Iris dark orange; cere and orbits livid black; bill orange-red; mandible dark yellow; feet olive-grey, claws dusky blackish."

Although it seems peculiar that two such closely allied species should occur on the same island, yet *N. iris* (Temm.) seems to be quite distinct. Our specimens of *N. rubripileum* either have the pileum quite red, or mixed with light green or pale greenish blue, some of the feathers having green or bluish edges. The young bird has the pileum yellowish green, the feathers tipped with red, these tips increasing in width, so that the forehead is quite orange-red.

Neops. iris was not met with by Mr. Everett.

54. **Geoffroyus personatus** (Shaw).

♂ ad. "Iris lemon-yellow; orbital skin and cere olive-brown; bill orange-red, the distal third yellow, and the tip horn-brown, mandible brown; feet olivaceous grey, claws dark grey." ♀. "Iris pale lemon-yellow; bill brown; feet olivaceous grey, claws dark grey."

55. **Trichoglossus haematodus** (L.).

A magnificent series of seventeen specimens, shot in July at Atapupu. "The correct colour of the iris in this bird when alive is in both sexes a vivid blood-red, with a very narrow inner ring of yellow, but the iris seems generally to turn to orange after death." Some, I think younger, specimens—both *males* and *females*—have very little red on the breast, which is yellow with only some faint concealed orange-red spots, while the under wing-coverts are bright red in every one of the series, but mostly with some orange-yellow edges to some or all. In the series of sixteen now before me from Sumba, there are five or six with hardly any red on the breast, and eight with bright yellow under wing-coverts, only here and there with a small red patch. I further find that most specimens from Timor have a brighter

* No other *Cuculidae* were procured on Timor, but before he went there Mr. Everett shot a specimen of

Surniculus musschenbroeki A. B. Meyer

just outside the town of Makassar, South Celebes. It will be remembered that this species was until quite recently only known by the type-specimen in Dresden, but that Mr. Everett collected two specimens on Bonthain Peak in Celebes. The type had been said to come from Batjan.

blue on the head, and that there is a tendency in them for a greater extent of the blue on the crown; and the Sumba specimens have mostly, though not always, a distinct green line under the eye as well as above it, while in the Timor birds the green line under the eye is not visible. In addition to all this, I find that the beak of the Sumba birds is larger, exceeding that of the Timor birds about 2 to 3 mm. in the length of the culmen, and about 1 to 3 in height, the same sexes being compared, which is necessary, because the *males* have generally slightly larger bills than the *females*. The wing also of the Sumba form is generally longer. The wing measures in Timor specimens from 144 to 154 mm., the average being about 150 to 152, only one out of seventeen having the wing fully 154 mm. long. In Sumba skins the wing measures 150 to 156 mm., the majority of the *males* having it 155 to 156 long, none reaching below 147 mm., a length found only in one *female*. Under the circumstances it becomes advisable to separate the Sumba form as

Trichoglossus haematodus fortis subsp. nov.

Typus ♂ ad. Waingapo, Sumba, A. Everett coll., September 1896.

56. **Ptistes jonquillaceus** (Vieill.).

♂. "Iris orange; cere yellowish brown; bill orange-red, with yellow tip, mandible reddish orange; feet greyish black, claws black." ♀. "Iris deep brownish orange; cere light yellowish brown." A fine series, shot in July at Atapupu. The wings of the *males* measure 180 to 190 mm. Most of the specimens were in moult in July.

57. **Cacatua parvula** (Bp.).

Two skins from Atapupu. From Schlegel (*Mus. P. B., Psittaci*, p. 137), Salvadori (*Cat. B. Brit. Mus.* XX. p. 120, footnote), and Finsch we learn that the type of *C. parvula* came from Semao, near Timor, and that it agrees with Timorese skins. Our two Timor skins may therefore be taken as typical *C. parvula*. In comparing them with our series of a dozen skins from Flores and Lombok, I find that all of them have conspicuously longer, thicker, and stronger beaks than the Timor birds. This observation is not new, for it had been made by Schlegel (*l.c.*) and by Finsch (*Papageien* I. p. 300). Indeed, the strong beak was the reason why Finsch considered the Flores and Lombok specimens to belong to the equally large-billed *C. sulphurea* of Celebes, his observation that they had, like *C. sulphurea*, a yellow patch on the ear-coverts, while this was wanting in the Timor birds, being erroneous, for all the Lombok, Sambawa, Flores, and Timor birds have the ear-coverts pale yellow, while it is of a much darker orange-yellow in *C. sulphurea* from Celebes. That is also the reason why Salvadori says that most, but not all, *C. parvula* had less strong bills than *C. sulphurea*. With the series in the Rothschild Museum and others which I have seen, and with the confirmatory observations of these authors, there can be no longer any doubt that the so-called "variation" in the size of the bills of *C. parvula* is not "individual," but **local**. I therefore propose the name of

C. parvula occidentalis subsp. nov.

for the large-billed form from Lombok and Flores (type: ♂ ad. Lombok, July 1896, A. Everett coll.), that from Timor and Semao remaining *C. parvula parvula*.

I find that many Parrots differ locally in the development of their bills; thus I found years ago that *Psittacus erithacus* L. differed locally in the size of beaks, and I therefore separated it into two subspecies. Thus I separated *Cacatua sulphurea djampeana*, and brought to light again *C. trobriandi* of Finsch.

58. **Ninox fusca** (Vieill.).

A small series from Atapupu. The *females* agree entirely with Dr. Sharpe's description and figure in Vol. II. of the *Cat. B. Brit. Mus.*, and the *males* are entirely similar. Wings 215—225 mm. "Iris lemon-yellow: cere dull green; bill bluish lead-grey; feet ochreous yellow, claws dark horn-brown."

59. **Strix flammea** L. (subsp.).

One skin, a *male*, shot at Atapupu on August 17th, 1897, with the coloration of the soft parts as in the Savu birds. It does, however, **not** belong to the Savu subspecies, which I have identified as Gould's *delicatula*, nor to the pale-tailed Sumba race, which I have separated as *Strix flammea sumbaënsis* on p. 270 of Vol. IV. of this journal. In coloration it agrees generally with *S. flammea delicatula*, though the breast, abdomen, and under wing-coverts are rather heavily spotted with black, these spots being more or less arrow-shaped on the breast and abdomen, and though the wings and scapulars are marked with rather large longish half black and half white spots, and the back with black spots. The dimensions, however, exceed much those of *Strix flammea delicatula*. The wing measures 290 mm.; the tail 125; tarsus 66; middle toe without claw 35. This is probably a race peculiar to Timor, but unfortunately I have only this single specimen before me.

60. **Astur torquatus** (Temm.).

Adult *male* and *female* in good plumage, and another adult *male* in abraded plumage, from Atapupu, end of August. Also a nestling, just showing the first feathers, and two young birds, *male* and *female*, in first plumage, from Atapupu, August. The young *male* had the "Iris ivory-yellow; cere and margin of gape light green, maxilla black, mandible and base of maxilla lead-grey; feet pale yellowish, tinged with green, claws black." The young *female*: "Iris greyish white; bill black, mandible lead-grey, clouded with black; cere and gape greenish; legs very pale whitish yellow, claws black."

Ever since I recorded for the first time this species from a new locality (Djampea and Kalao, Nov. Zool. III. p. 177), and afterwards from Savu (Nov. Zool. IV. p. 270), I have been interested in the differences seen in different specimens. Now, with our series from Timor and others from Alor before me, I find that the adult *males* and *females* from Timor, Savu, and Alor differ from those from Flores, Djampea, and Kalao in being below paler, the rufous bars being lighter, narrower, and becoming less distinct and less dark towards the belly, the thighs being white with very pale rufous cross-bars, while those from Flores, Djampea, and Kalao are darker rufous below, generally not so much lighter on the abdomen than on the breast, the thighs pale rufous, with or without distinct darker rufous cross-bars. I find further that the young birds from Timor and all but one

from Savu are darker above than those from Flores, Djampea, and Kalao; those from Timor and Alor looking above almost like a Kestrel, the feathers rusty red with broad blackish cross-markings, those from Savu being darker, the blackish brown on the back more extended, so that the feathers might be described as blackish brown with rufous edges. These latter are very much like young Flores birds; but all those from Flores, and still more so those from Djampea and Kalao, are paler above. It is, however, evident that the latter are in older plumage and more or less abraded and faded, being before their moult, and I think that all their differences can be accounted for in that way, and that they are not of subspecific or specific value, especially as one of the young Savu birds agrees entirely with those from Djampea and not with the other Savu birds.

Unfortunately we did not receive any specimens from Lombok, but the British Museum possesses one, the type of Sharpe's *Astur wallacei*. This is still more rufous than the more western forms before me (from Flores), but does not differ otherwise. It has been described as a *male*, but is doubtless a *female*. The young bird from Lombok, described by Dr. Sharpe in a footnote on p. 128 of Vol. I. of the *Cat. B. Brit. Mus.*, seems certainly to belong to the old bird from that place, while the Buru specimens will be found to belong to another form. As it is, we must, I think, distinguish between, at least, an eastern and a western subspecies, or perhaps three, namely:—

1. A very rufous form (Lombok).
2. A less rufous darker form (Flores, Djampea, Kalao).
3. A less rufous paler form (Timor, Savu).

I think, however, that possibly the Flores, Djampea, and Kalao birds may have to be united with the Lombok form, and if this my surmise is correct, the latter would probably have to be named *A. torquatus wallacei* (Sharpe). More material of adult birds from Lombok and Sambawa is required to solve this problem.

With regard to other allied forms I wish to offer the following remarks:—

In my first article on the birds collected in Sumba by Mr. Doherty, I mentioned a Hawk from Sumba of this group as *Astur torquatus*. Afterwards I found that Dr. A. B. Meyer had described an *Urospizias sumbaënsis* from that island, and therefore I referred (Nov. Zool. IV. p. 270) my bird to *U. sumbaënsis*. I have now several young birds and a fine old pair sent by Mr. Everett. The young ones are exactly like those from Flores, Djampea, and Kalao. The old birds agree perfectly with the majority of the Flores birds, except that the cross-bars below are more greyish and less reddish. As this character varies to a certain extent in specimens from the same places, it must remain doubtful whether it is here a specific or an individual character. The characters stated by me as distinguishing it from the true *A. torquatus* are useless, as they vary in other individuals, and Dr. Meyer's characters have to be disregarded for the purpose, as he compared it with a more distinct ally. I expect that the Sumba bird can either be united with the Flores one, or may be subspecifically distinct, but nothing more.

I cannot bring myself to unite with *A. torquatus* the Australian *A. cruentus*, which seems to differ in being more regularly barred below and in having a longer tarsus. The birds from New Guinea are probably not separable from the latter.

The change from the longitudinally marked plumage of the immature bird to the cross-barred plumage of the adult bird is effected through a moult, as shown by some of our skins.

61. **Cuncuma leucogaster** (Gm.).

Young *female* in very abraded plumage, Atapupu, August 1897.

62. **Haliastur indus** (Bodd.) (? **intermedius**).

A very young *female*, in first plumage, Atapupu, August. It belongs most likely to the subspecies *intermedius*, but as it is not accompanied by adult specimens I cannot say for certain.

63. **Baza subcristata** Gould.

Male, August, Atapupu.

64. **Tinnunculus moluccensis occidentalis** M. & Wg.

Male and *female*, August, Larantuka and Atapupu.

65. **Falco lunulatus** Lath.

♂ ad. July, Atapupu. "Iris chocolate-brown; orbital skin pale bluish: cere light dirty green; bill lead-grey, apical portion black; legs pale wax-yellow, claws black."

66. **Osmotreron psittacea** (Temm. & Knip.).

Filaran, July, Atapupu, July and August. ♂ ad. "Iris orange, with an inner ring of olive-yellow; orbital skin pale bluish green; bill horn-white, basal half dull bluish; feet dull purple-carmine." The edges of the greater and median wing-coverts are yellow in all the *males*, while all the *females* have them white, or very pale yellow on the longer ones, with the exception of one, which has them as yellow as the *males*. It is not improbable that the latter is wrongly sexed, as it was skinned by a native hunter.

67. **Ptilinopus cinctus** (Temm.).

This beautiful Pigeon was found not uncommon at Atapupu in July and August. The yellow tinge on the throat and breast is very strong in fresh skins. The adult *male* has the "Iris brilliant red; bill vivid yellow, strongly tinged with leaf-green on the basal half." The young bird in first plumage has the feathers of the head and neck barred with very pale grey, those of the back and rump and the wing-coverts **green**, with yellow margins. The black band across the breast is not developed.

68. **Carpophaga rosacea** (Temm.).

Two pairs, Atapupu, July and August.

69. **Turacoena modesta** (Temm.).

Atapupu, July and August. ♀ ad. "Iris with an outer crimson-lake ring and an inner yellow one; bare orbital skin chrome-yellow; bill and feet black." Another ♀ ad. "Iris orange; orbital skin greenish brown."

70. **Turtur tigrinus** (Temm.).

July, Filaran and Atapupu.

71. **Geopelia maugeus** (Temm. & Knip.).

July, Atapupu. "In the living bird the iris is white; the orbital skin pale chrome-yellow; bill dark bluish plumbeous; legs dull purple-red, claws brownish grey."

72. **Chalcophaps chrysochlora** (Wagl.).

There are three skins from Atapupu, shot in July, that belong to this species, which, according to the law of priority, should, I think, be called *Chalcophaps javanica*, although it does not occur in Java. Two of the specimens are not fully adult, and they are only more or less grey on the nape. The third, however, which is evidently an adult *male*, has the crown from the eyes backward, the upper neck, and the interscapulium down to the metallic green back ashy grey. None of the fifteen skins from Australia, New Guinea, and other places show this character.

73. **Heteractitis brevipes** (Vieill.).

♂, August 16th, Atapupu. "Legs ochreous yellow."

74. **Himantopus leucocephalus** Gould.

♀, July, Atapupu.

75. **Actitis hypoleucus** (L.).

Atapupu, August.

76. **Anas gibberifrons** S. Müll.

One from Atapupu. ♂. "Iris vivid blood-red; bill lead-blue; feet dark brown."

77. **Nycticorax caledonicus** (Gm.).

Male, August 1897, Atapupu.

78. **Tachybaptes philippensis** (Bonn.).

♂ ♀ juv., July, Atapupu. ♂. "Iris crimson-lake."

79. **Gallus gallus** (L.).

Male and *female* from Atapupu.

80. **Synoicus raalteni** (Temm.).

A fine series, shot in July near Atapupu, well confirms my statements, made in Nov. Zool. IV. p. 271, as to the distinctness of *S. raalteni pallidior* of Savu, for all the Timor birds are of a darker and more rufous brown colour. The *male* has the "Iris dark red: bill lead-blue, culmen and tip black; legs dark ochre-yellow."

81. **Turnix maculosus** (Temm.).

Several *females* and a *male* from Atapupu. The adult *female* has the "Iris (in living bird) milk-white; the bill dusky blackish, basal part of mandible chrome-yellow." The *male*: "Iris yellowish white: bill chrome-yellow, culmen and tip of mandible horn-black; legs dull yellow."